

REVIEWS.

A Nature Wooing at Ormond by the Sea. By W. S. Blatchley, State Geologist of Indiana. 245 pp., 12 pl., 62 cuts, map. Indianapolis, Nature Pub. Co.

Entomologists contemplating a winter trip south should not fail to read this graphic account of collecting experiences, conditions, and the results obtained during March and early April in the vicinity of Ormond, Fla. In addition to the many interesting biological notes incorporated in the text there are appended lists of the Odonata (18 species), Orthoptera (30 species), Heteroptera (20 species), butterflies (27 species), and Coleoptera (55 species), secured. In this appendix the author has unfortunately published the description of a new species (*Eritettix sylvestris* — Acridiidae), a practice which cannot be abandoned too soon. The proper place for such publication is in the columns of the regular scientific journals or other works of recognized technical character.

In addition to the entomological notes the volume contains an account of the Ormond shell mound and sufficient information of general interest to entitle it to a place in the luggage of every tourist.

A. P. MORSE.

Monographie des Cynipides d'Europe et d'Algérie. Par l'Abbé J. J. Kieffer. Tome Premier. A. Hermann, 6 et 12, rue de la Sorbonne, Paris, France.

This important work, representing volume 7 of André's *Species des Hyménoptères d'Europe et d'Algérie*, has just been received.

Unfortunately, not many Americans are yet familiar with this great work of André, which was begun some years ago by Mons. Edmond André, and since his death, is being completed by his brother, Mons. Ernest André, a noted hymenopterologist, who has engaged some of the best European specialists to help him out in certain families: Rev. T. A. Marshall in the Braconidae, Robert du Buysson in the Chrysididae, etc.

The volume before us is written by Abbé J. J. Kieffer, better known for his work in the Diptera, and treats of two subfamilies of the Cynipidae or gall-making wasps — the Ibalinae and the Cynipinae. It is a large octavo, contains 678 pages, and is illustrated by 27 plates, each plate being crowded with figures showing the structural characters of these wasps and the galls or deformations caused by them on various trees and plants.

The work is admirably planned. After a brief introduction Abbé Kieffer enters minutely into the general characters of the Cynipidae: the head, thorax, abdomen, and their appendages are taken up in order and accurately and fully defined.

Before entering into the systematic account of these insects, he discusses fully their early stages—the egg, egg laying, larva, and pupa. The biology of the Cynipidae should come in here but is only briefly touched. The Abbé, however, says: “Nons ne donnons ici que généralités sur la biologie des Cynipes, en nous réservant de traiter cette question plus longuement plus tard pour chacune des cinq tribus dans lesquelles on réparti ces insectes.”

A good bibliography of the Cynipidae follows; this appears to be fairly complete, the list of papers given numbering 342. No reference, however, is made to Saussure's genus *Oberthürella*, described from Africa, a remarkable form falling in my subfamily *Liopterinae*.

Abbé Kieffer gives a good resumé of the various schemes of classification proposed for these insects, and has recognized five tribes, viz.: (1) *Ibaliinae*, (2) *Cynipinae*, (3) *Allotriinae*, (4) *Encoilinae*, and (5) *Figitinae*.

This arrangement is good; it is substantially Förster's classification, who called the tribes families, *Ibalioidae*, *Cynipoidae*, etc., except that Förster had two additional families, the *Megapelmoïdae* and the *Onychioidae*. Kieffer has evidently merged these with his tribe *Figitinae*, to which they are undoubtedly closely allied, having originated from a common stem.

In the opinion of the writer, the families of Förster are *natural groups*, although probably not of equal value, and all should be accepted in the sense of tribes and subfamilies. The termination of these natural groups, whether in *oidae*, *ida*, *ides*, *idae*, *ina*, *inae* or *ini*, is of secondary importance, until a uniform system, for indicating families, subfamilies and tribes, is established.

The Cynipides of the older authors, I think, represent a superfamily—the Cynipoidea, with two very distinct families, the *Figitidae* and the *Cynipidae*, nearly as was first pointed out by Hartig in 1840.¹

In my own systematic work in the Hymenoptera, I have conscientiously endeavored to define clearly the families, subfamilies and tribes, making use of the endings *idae*, *inae* and *ini* to designate each, respectively, so that no mistake can be made as to what the groups really represent.

The groups recognized by Kieffer as tribes are really natural groups, first pointed out by Thomson and Förster, and should be accepted, whether they be called families, subfamilies, or tribes.

The first subfamily treated by Kieffer is the *Ibaliinae*; it is represented by only a single species in Europe, while in America we have several species.

¹ *Vide* my arrangement, Proc. U. S. Nat. Museum, XXIII, 1900, pp. 199 *et seq.*

The tribe Cynipinae of Kieffer, includes both the genuine gall-makers (our Cynipinae) and the inquilines or commensals (our Synerginae). He begins with an excellent table for recognizing the galls found on all trees and plants except those found on oak trees; the galls found on the oak are tabulated in a separate table. Each species of oak is then taken up separately and a good table of the galls found on each is given. All the tables are full and clear, and will be found of incalculable value to the student; they make the identification of the numerous European cynipidous galls easy.

Kieffer devotes many pages to the origin, formation, and structure of galls, the uses they are put to, and to heterogenesis and parthenogenesis. It is the most interesting part of the work and should be read by all.

In an excellent dichotomous table of the genera of the Cynipides gallicoles, pages 239 to 257, Kieffer defines 22 genera. He describes one genus, PANTELIELLA, as new. It is allied to DIASTROPHUS, but is easily separated by the mesonotum being longitudinally striate, by the claws being feebly denticulate, and by the relative length of the second antennal joint.

This table of genera does not include all the known genera of the gall-making Cynipids, but only those found in Europe: other exotic genera American, African, etc., not included in the table, are, however, alluded to in footnotes.

In going through this work, one feature that especially commends itself is the compiled list of the commensals and parasites bred from each species of gall that terminates the description. Much time and labor have been expended in compiling these lists; they are, however, of immense value, not only as an aid to the identification of the species, but on account of the great insight they give in regard to the habits and parasitism of the many species involved in these rearings.

Because a parasite is bred from a cynipid gall it does not necessarily follow that it attacks the gall-maker; it may or it may not; it may come from some of the commensals, coleopterous, lepidopterous, neuropterous, etc., often found in galls.

The importance of this is well brought out by Kieffer's list of commensals and parasites bred from a common root-gall on oak, *Biorhiza pallida* Oliver, arranged in two columns. Here it is:

Commensals.

Coleoptera: *Belaninus villosus* Fabr.
 Neuroptera: *Hemerobius nervosus* F.

Parasites.

Hymenoptera: *Bethylidae*, 2 species
Ceraphronidae, 2 species
Platygasteridae, 1 sp.
Torymidae, 11 species

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| Lepidoptera : | <i>Lithosia complana</i> L. | Hymenoptera : | <i>Eurytomidae</i> , 7 species |
| | <i>Phthoroblastis motacillana</i> Z. | | <i>Encyrtidae</i> , 3 species |
| | “ <i>costipunctana</i> Hw. | | <i>Pteromalidae</i> , 28 species |
| | (= <i>gallicolana</i> 3.) | | |
| | <i>Steganoptycha corticana</i> H. | | <i>Eulophidae</i> , 9 species |
| | <i>Penthinia profundana</i> Sr. | | <i>Ichneumonidae</i> , 9 species |
| Hymenoptera : | <i>Synergus pomiformis</i> Fonse | | <i>Braconidae</i> , 9 species |
| | (= <i>fascialis</i> Hart.) | | |
| | “ <i>ruficornis</i> Hart. | | |
| Diptera : | <i>Clinodiplosis biorhizae</i> Kief. | | |

The bethylids came from the Lepidoptera, the ceraphronids and platygasterids from the Diptera, the ichneumonids and braconids from the Coleoptera and the Lepidoptera, etc., etc.

Much more could be said of this important work, the most thorough and interesting yet published on the Cynipidae. It must, however, be seen and read to be thoroughly appreciated and should be found in all our libraries. The author is to be congratulated on his splendid work.

WM. H. ASHMEAD.